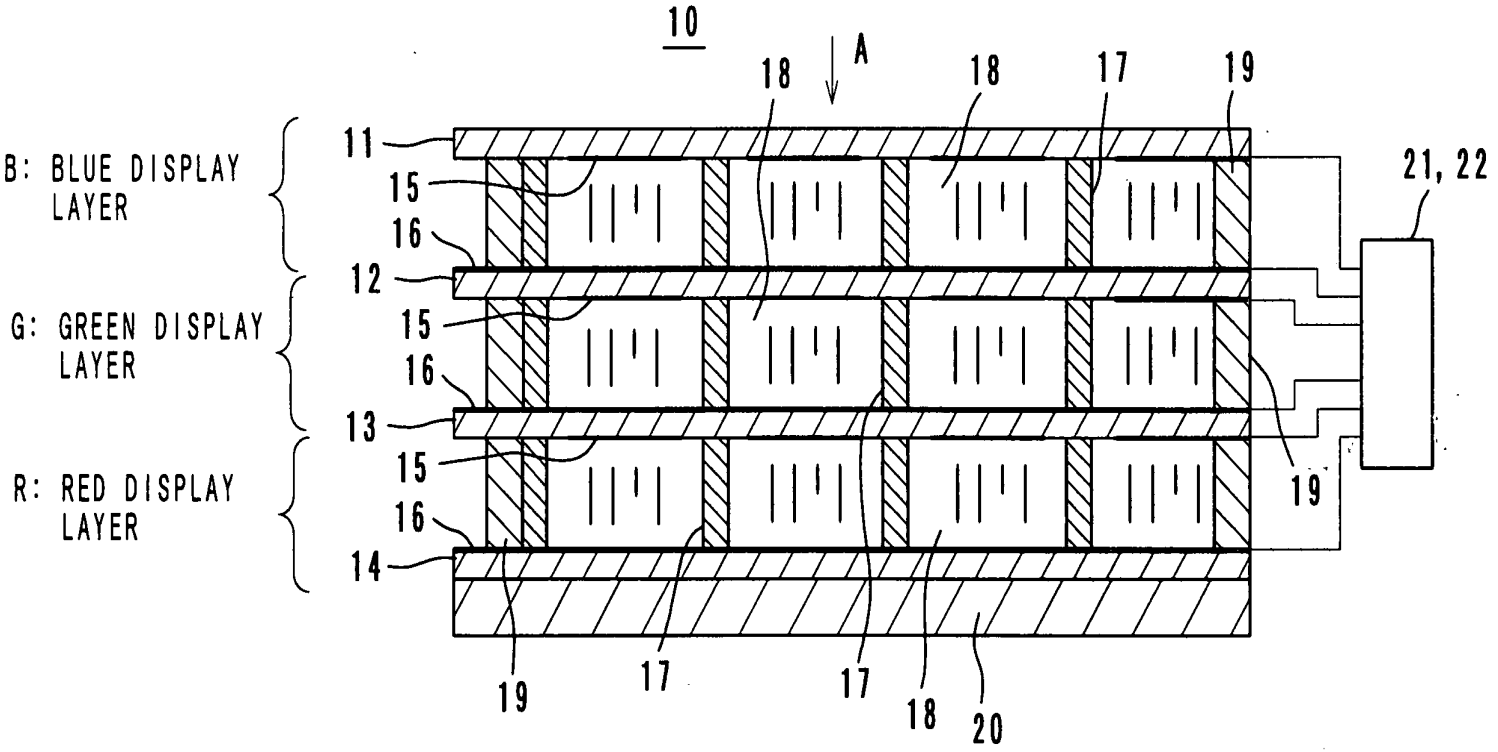
09527350 "031700

FIG. 1



0950250.0950250

FIG. 2

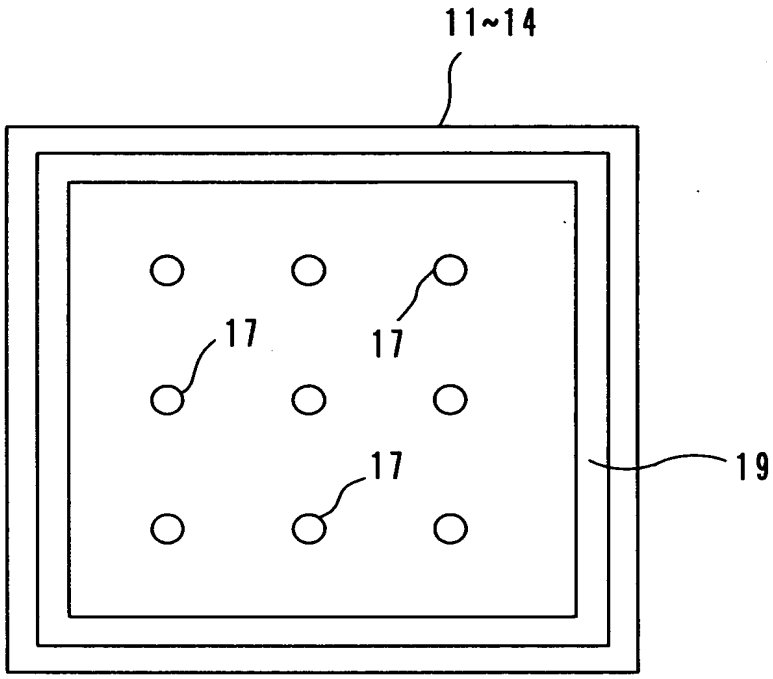


FIG. 3

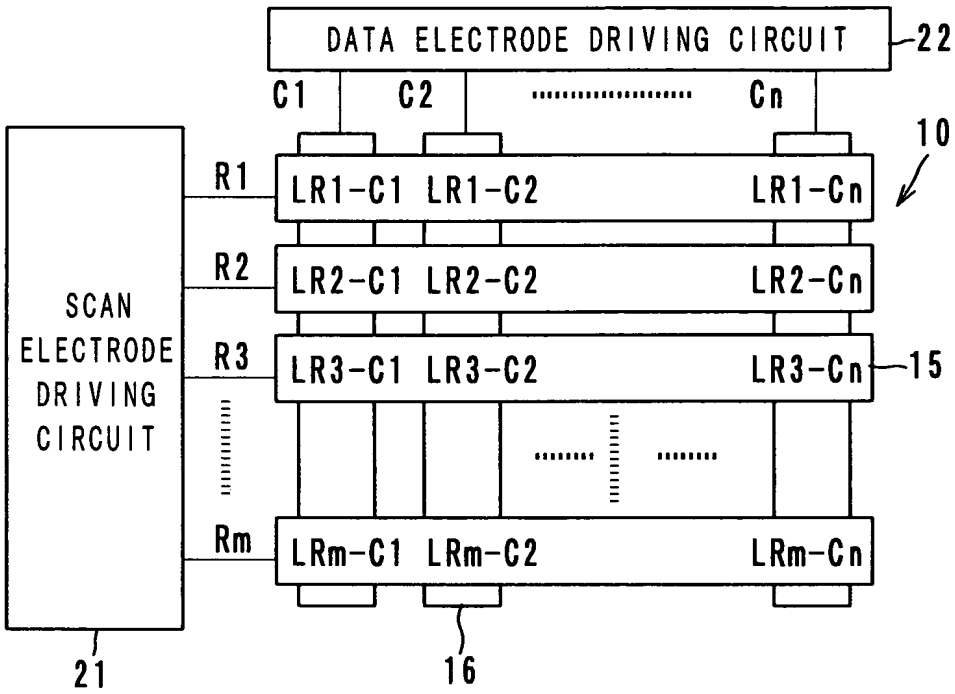

DATA ELECTRODE DRIVING CIRCUIT
22
C1
C2
Cn
10
R1
LR1-C1 LR1-C2 LR1-Cn
R2
LR2-C1 LR2-C2 LR2-Cn
SCAN ELECTRODE DRIVING CIRCUIT
R3
LR3-C1 LR3-C2 LR3-Cn
15
Rm
LRm-C1 LRm-C2 LRm-Cn
21
16

FIG. 4

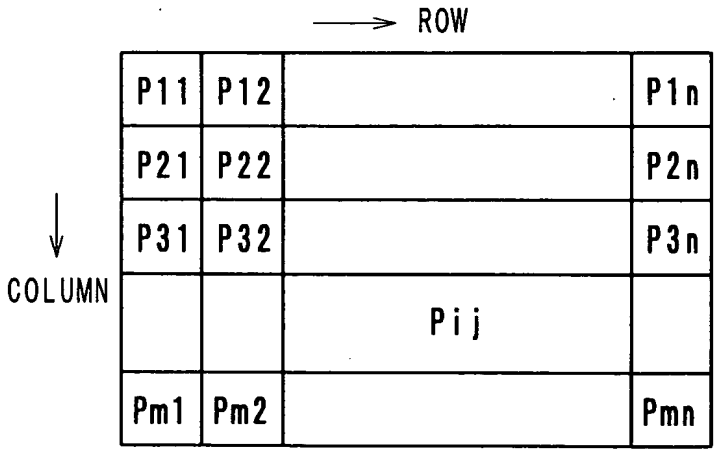

ROW
COLUMN
P11 P12 P1n
P21 P22 P2n
P31 P32 P3n
Pij
Pm1 Pm2 Pmn

FIG. 5

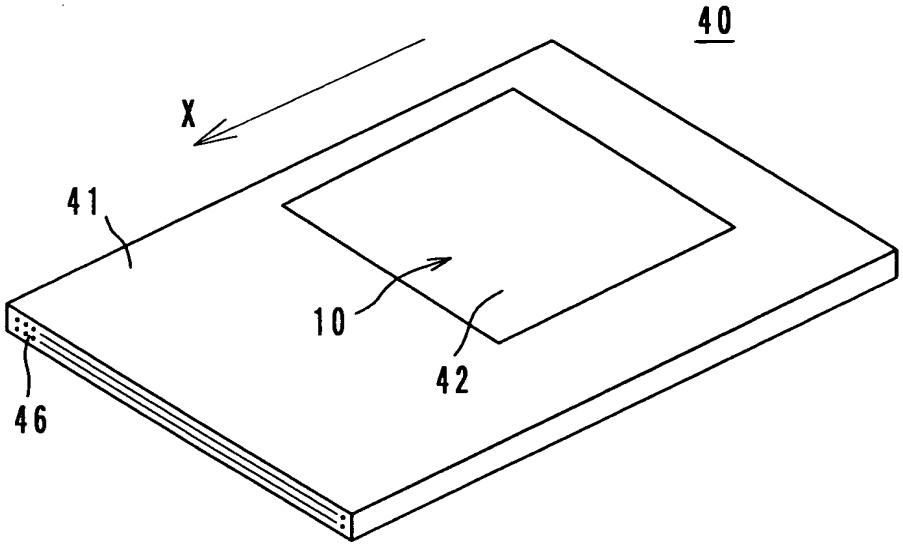
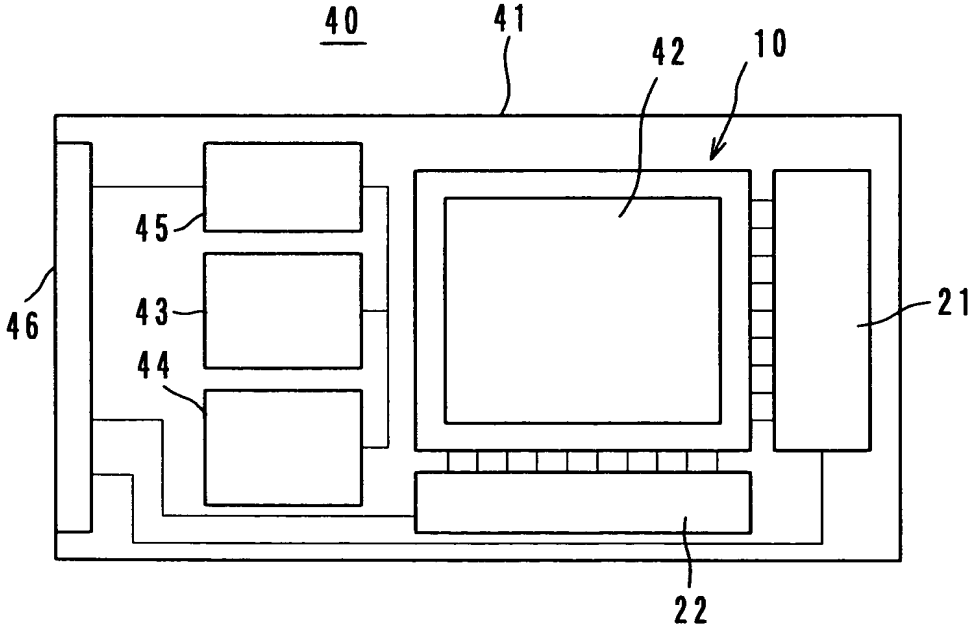


FIG. 6



0037600 "05/25/2560

FIG. 7

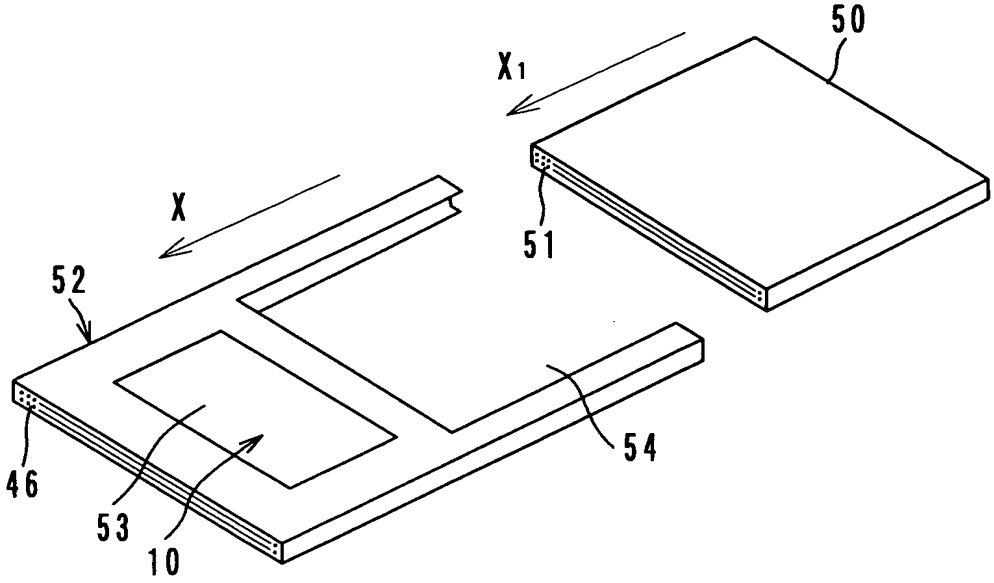


FIG. 8

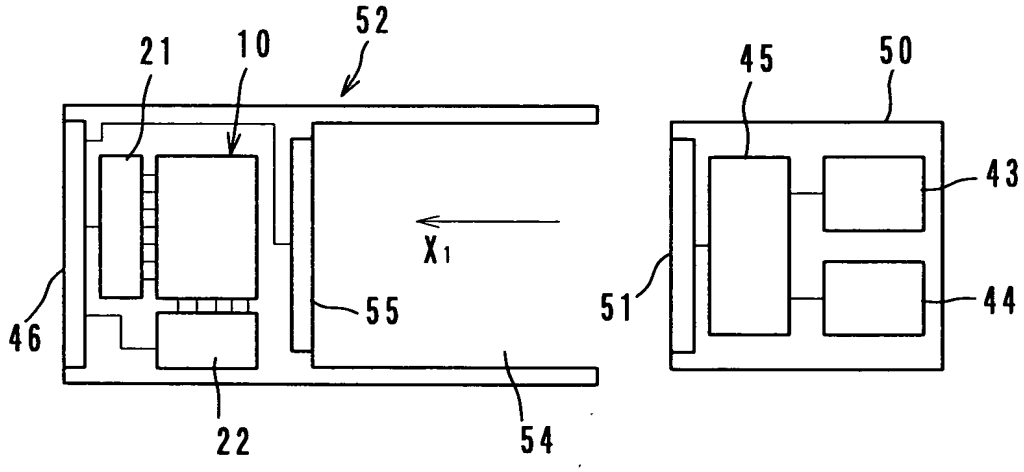


FIG. 9

FIG. 9a

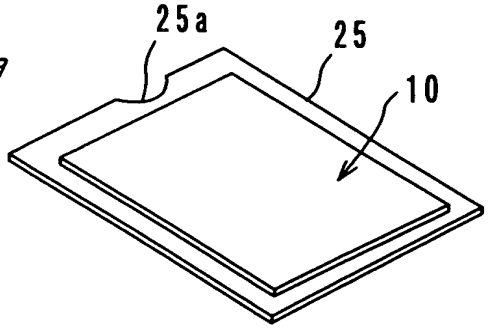


FIG. 9b

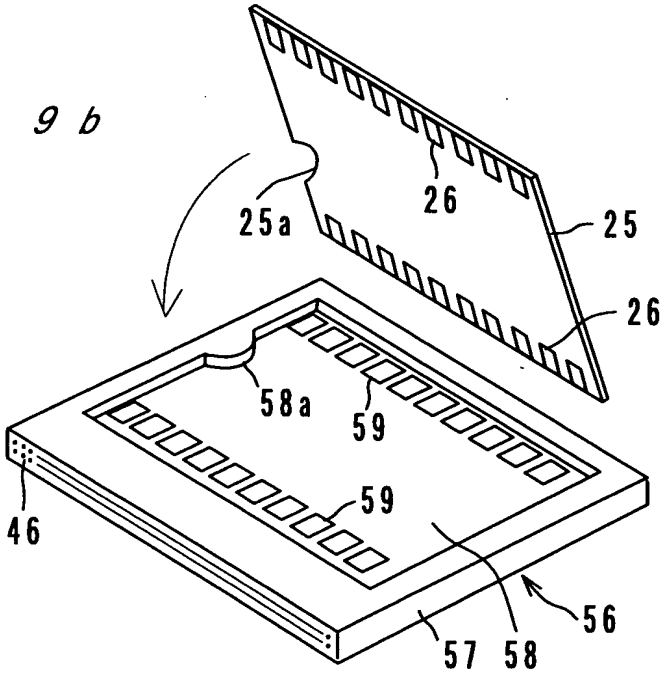
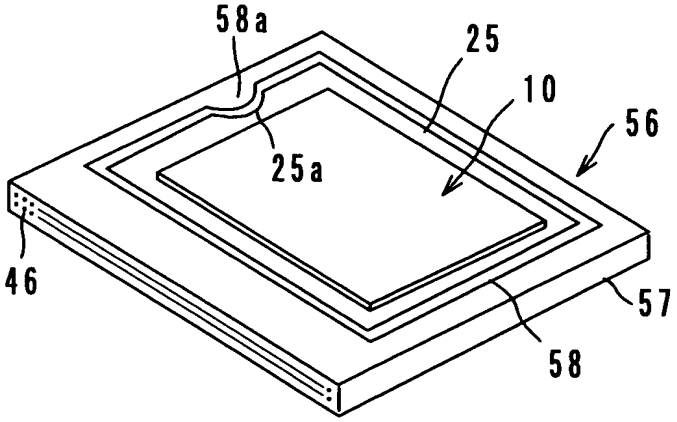


FIG. 9c



0057350-0057400

FIG. 10

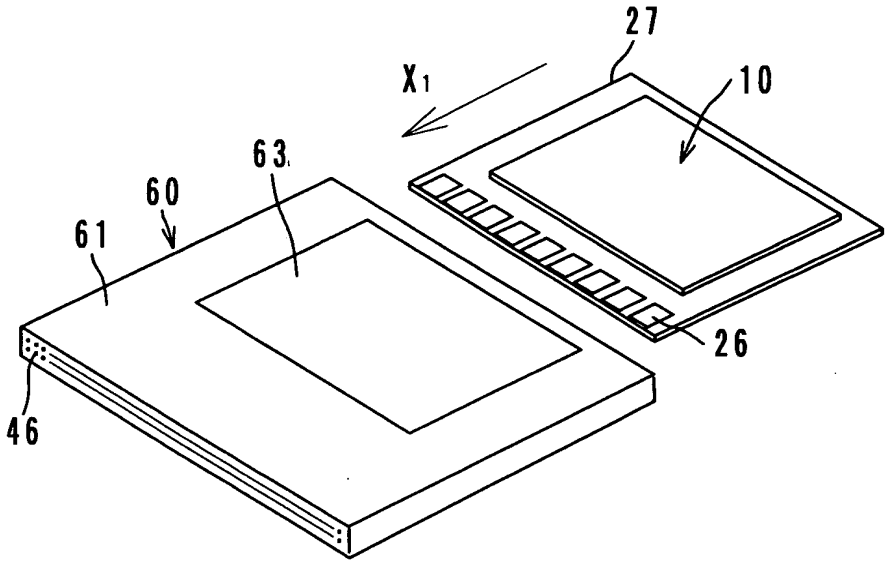


FIG. 11

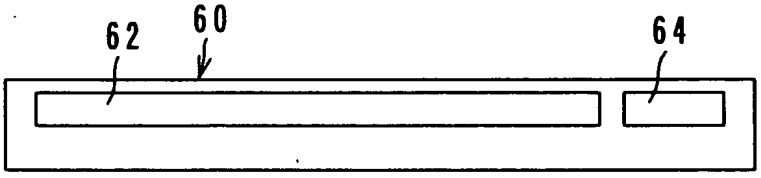


FIG. 12

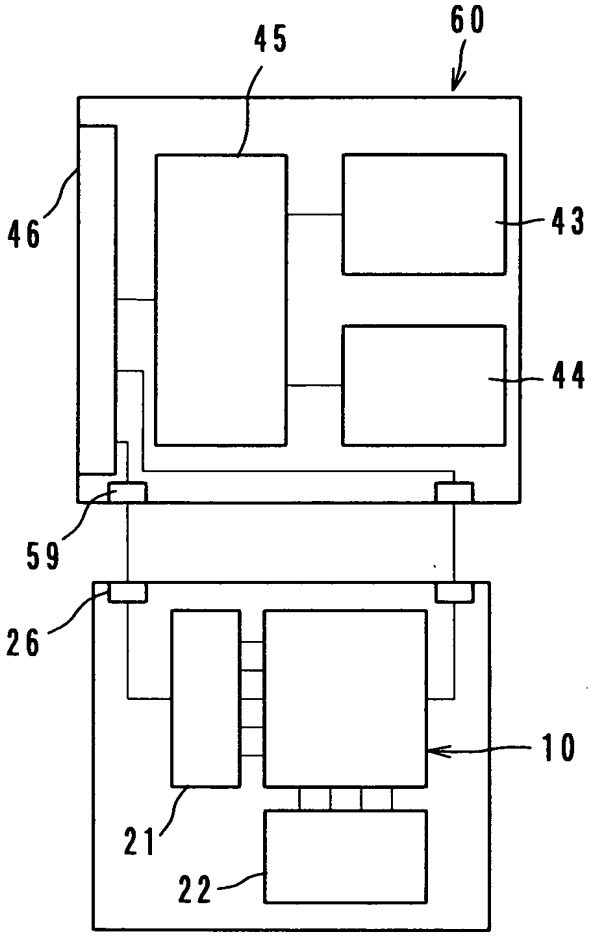


FIG. 13

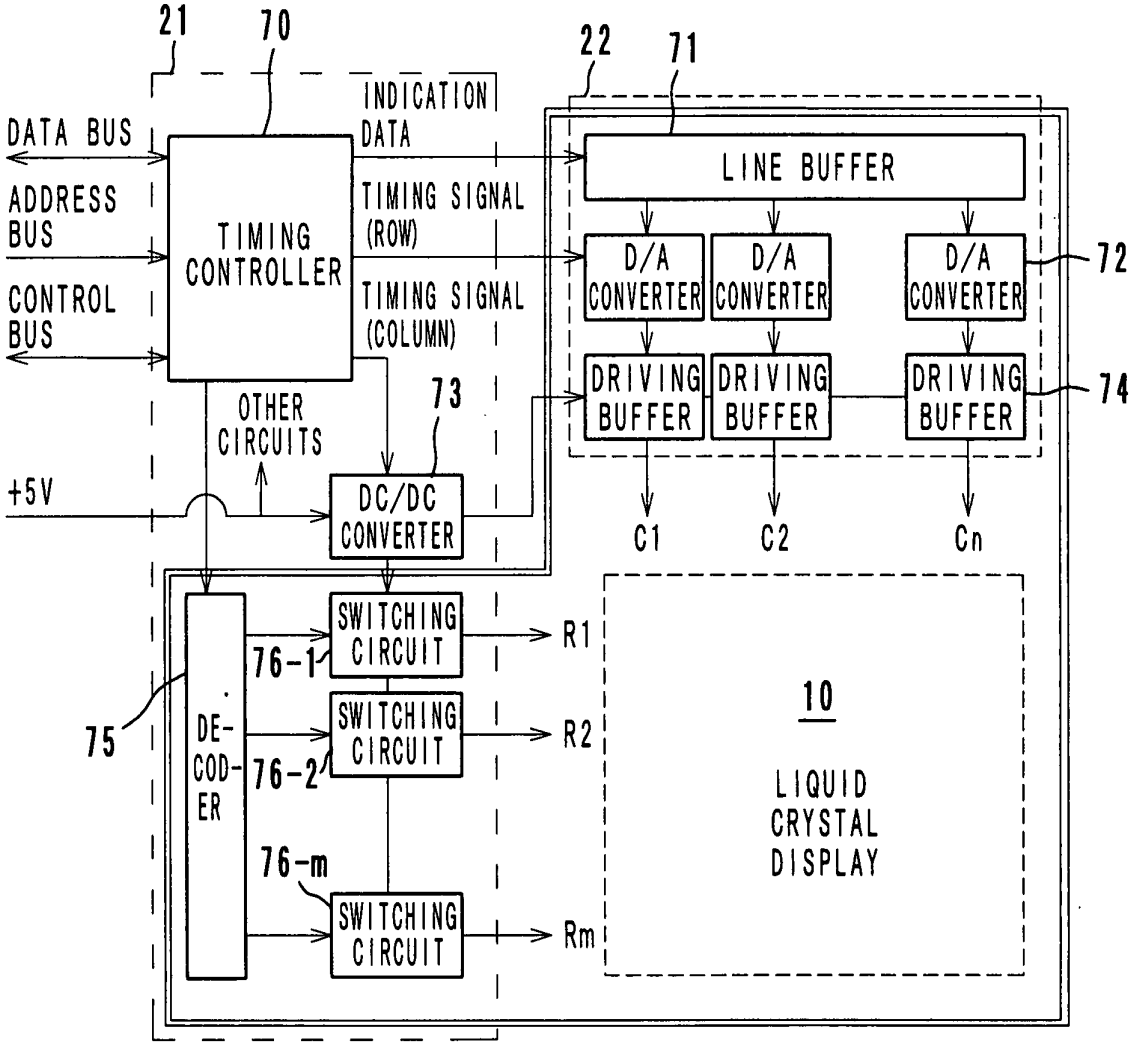

21
70
22
71
DATA BUS
ADDRESS BUS
CONTROL BUS
TIMING CONTROLLER
INDICATION DATA
TIMING SIGNAL (ROW)
TIMING SIGNAL (COLUMN)
LINE BUFFER
D/A CONVERTER
D/A CONVERTER
D/A CONVERTER
72
DRIVING BUFFER
DRIVING BUFFER
DRIVING BUFFER
74
OTHER CIRCUITS
73
+5V
DC/DC CONVERTER
C1
C2
Cn
SWITCHING CIRCUIT
SWITCHING CIRCUIT
SWITCHING CIRCUIT
76-1
76-2
76-m
R1
R2
Rm
75
DE-COD-ER
10
LIQUID CRYSTAL DISPLAY

FIG. 14

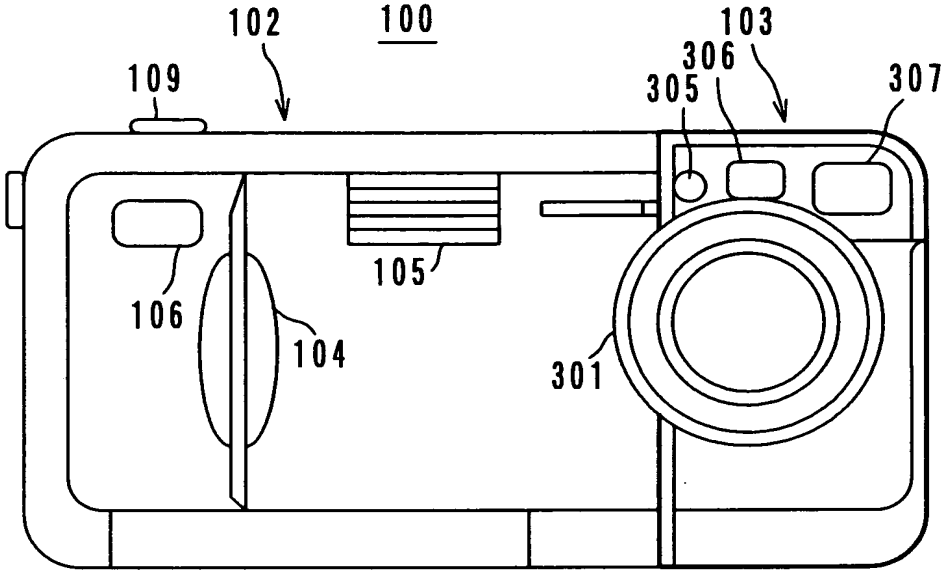
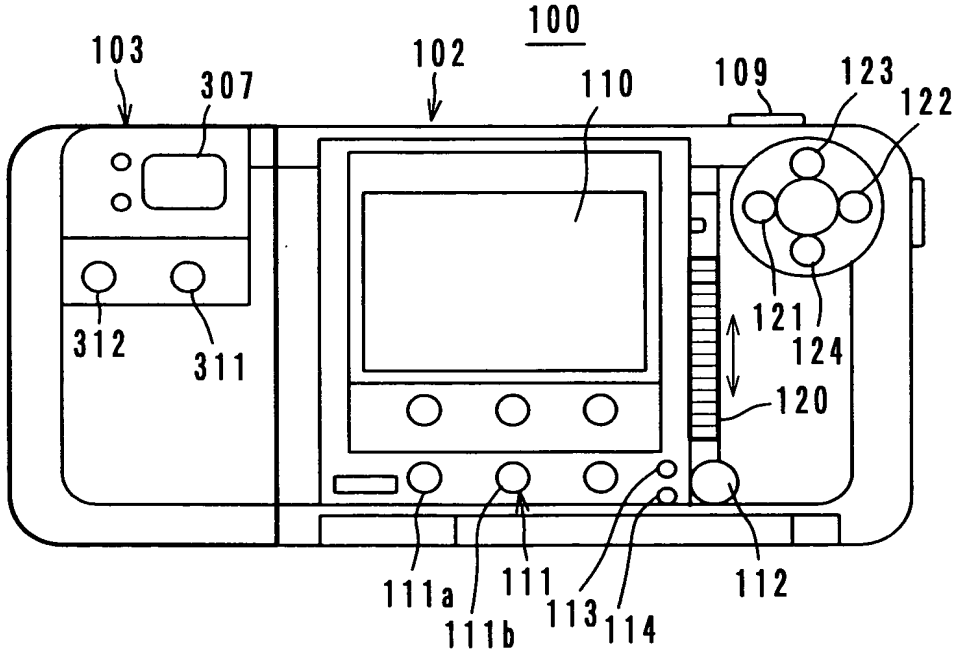

100
102
103
109
305
306
307
105
106
104
301

FIG. 15


100
103
307
102
110
109
123
122
121
124
120
312
311
111a
111b
111
113
114
112

0055-0055-0050

FIG. 16

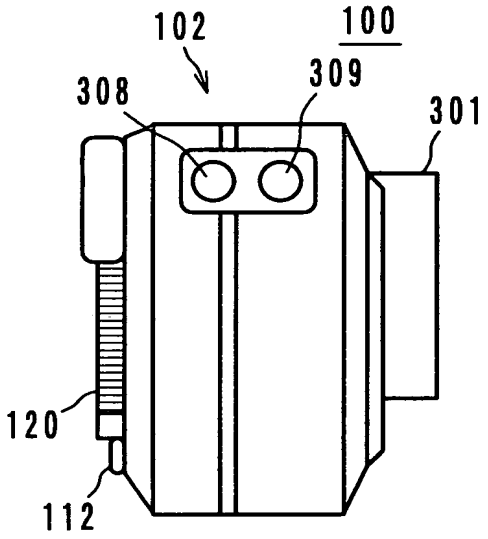


FIG. 17

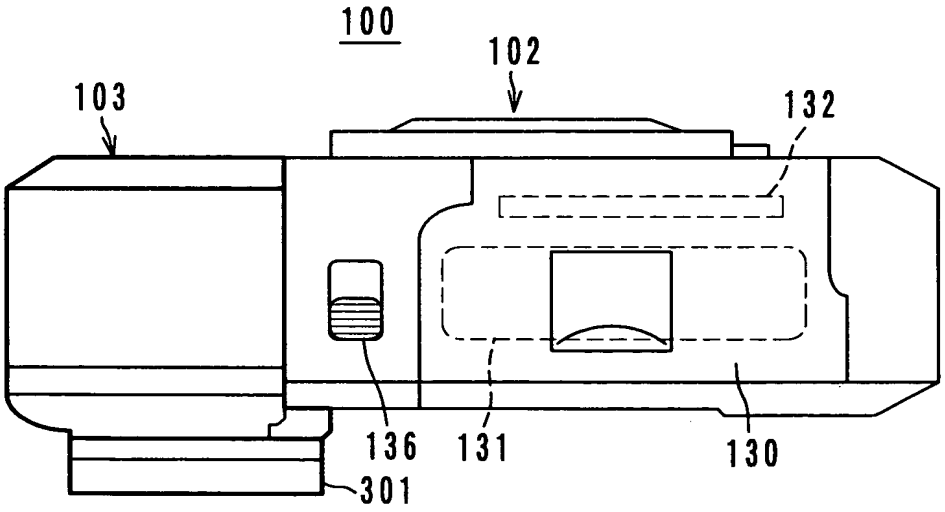


FIG. 18

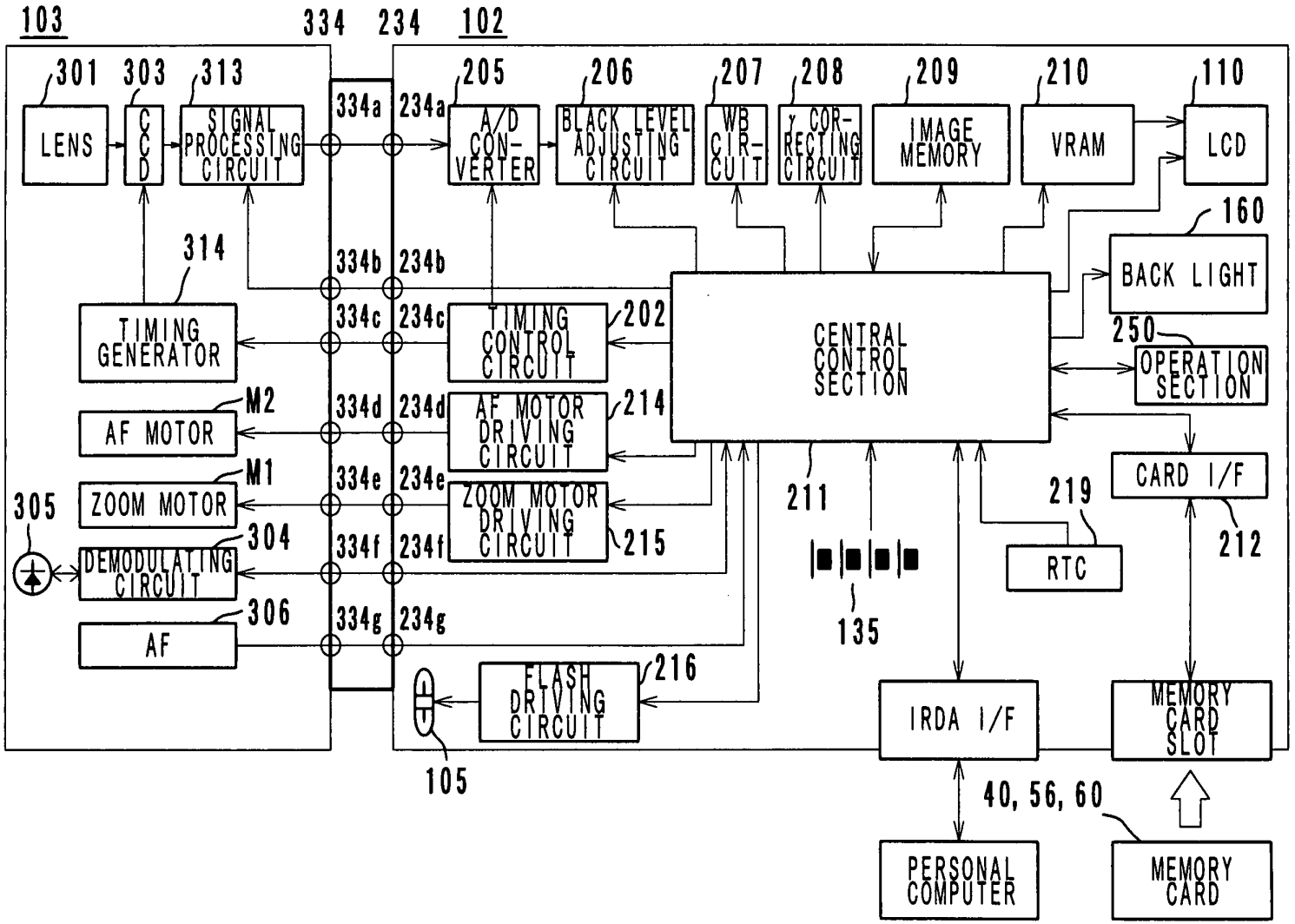

103
334
234
102
301
303
313
205
206
207
208
209
210
110
LENS
CCD
SIGNAL PROCESSING CIRCUIT
334a
234a
A/D CONVERTER
BLACK LEVEL ADJUSTING CIRCUIT
WB CIRCUIT
γ CORRECTING CIRCUIT
IMAGE MEMORY
VRAM
LCD
160
BACK LIGHT
314
334b
234b
TIMING GENERATOR
334c
234c
TIMING CONTROL CIRCUIT
202
CENTRAL CONTROL SECTION
250
OPERATION SECTION
M2
AF MOTOR
334d
234d
AF MOTOR DRIVING CIRCUIT
214
M1
ZOOM MOTOR
334e
234e
ZOOM MOTOR DRIVING CIRCUIT
215
CARD I/F
212
305
304
DEMODULATING CIRCUIT
334f
234f
211
219
RTC
135
306
AF
334g
234g
FLASH DRIVING CIRCUIT
216
IRDA I/F
MEMORY CARD SLOT
105
40, 56, 60
PERSONAL COMPUTER
MEMORY CARD

FIG. 19

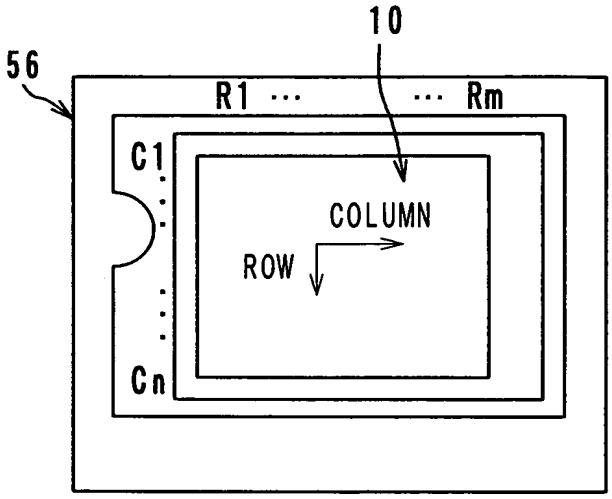


FIG. 20

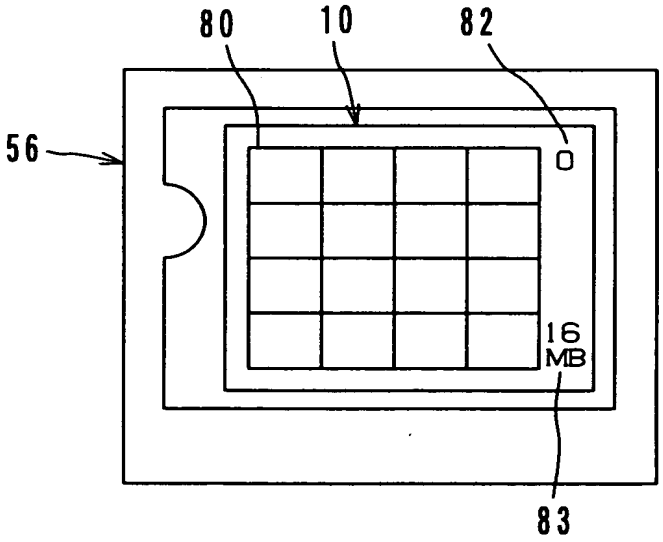
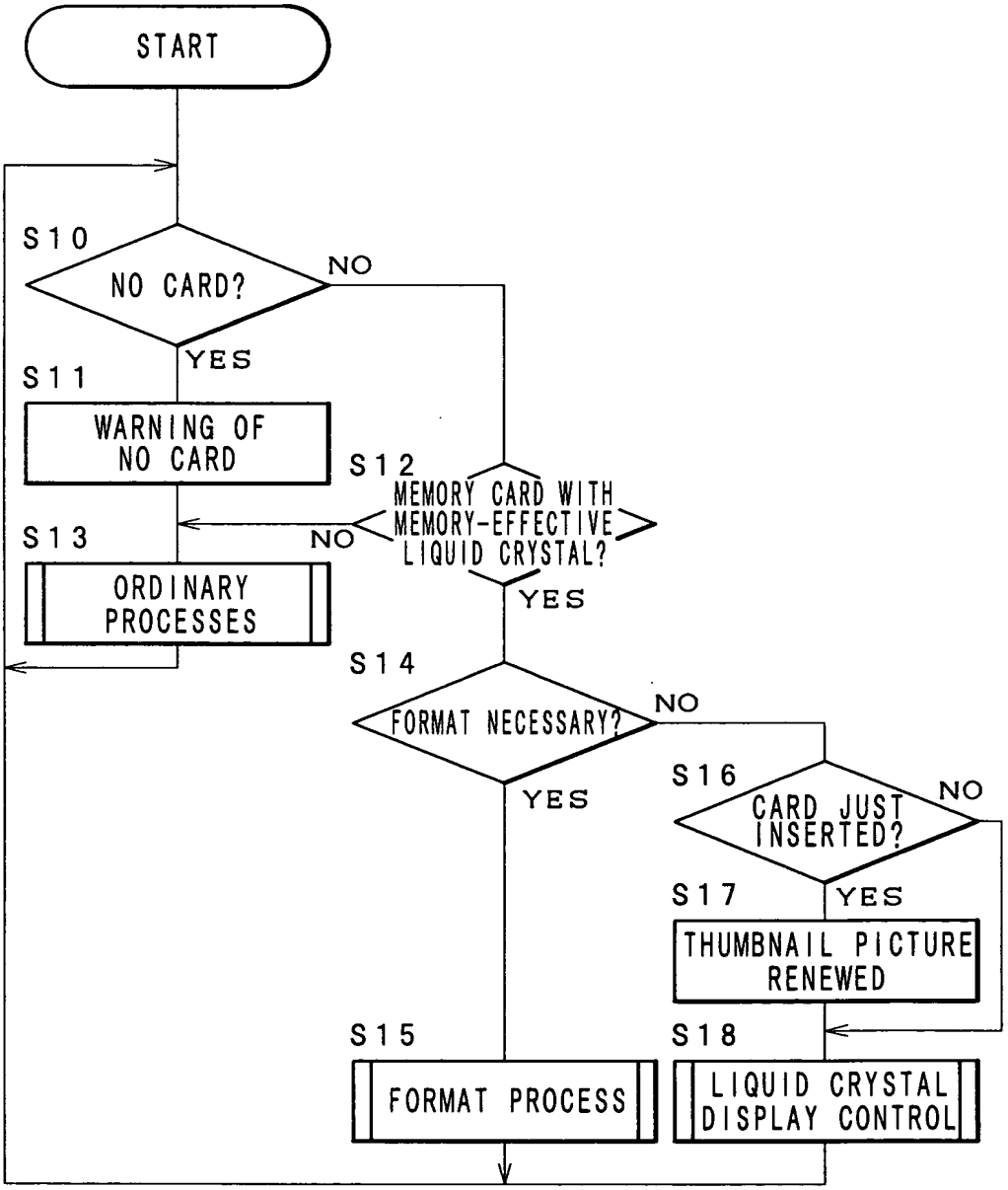


FIG. 21


START
S10
NO CARD?
NO
YES
S11
WARNING OF NO CARD
S12
MEMORY CARD WITH MEMORY-EFFECTIVE LIQUID CRYSTAL?
NO
S13
ORDINARY PROCESSES
YES
S14
FORMAT NECESSARY?
NO
YES
S16
CARD JUST INSERTED?
NO
S17
YES
THUMBNAIL PICTURE RENEWED
S15
FORMAT PROCESS
S18
LIQUID CRYSTAL DISPLAY CONTROL

JP2005-050350A

FIG. 22

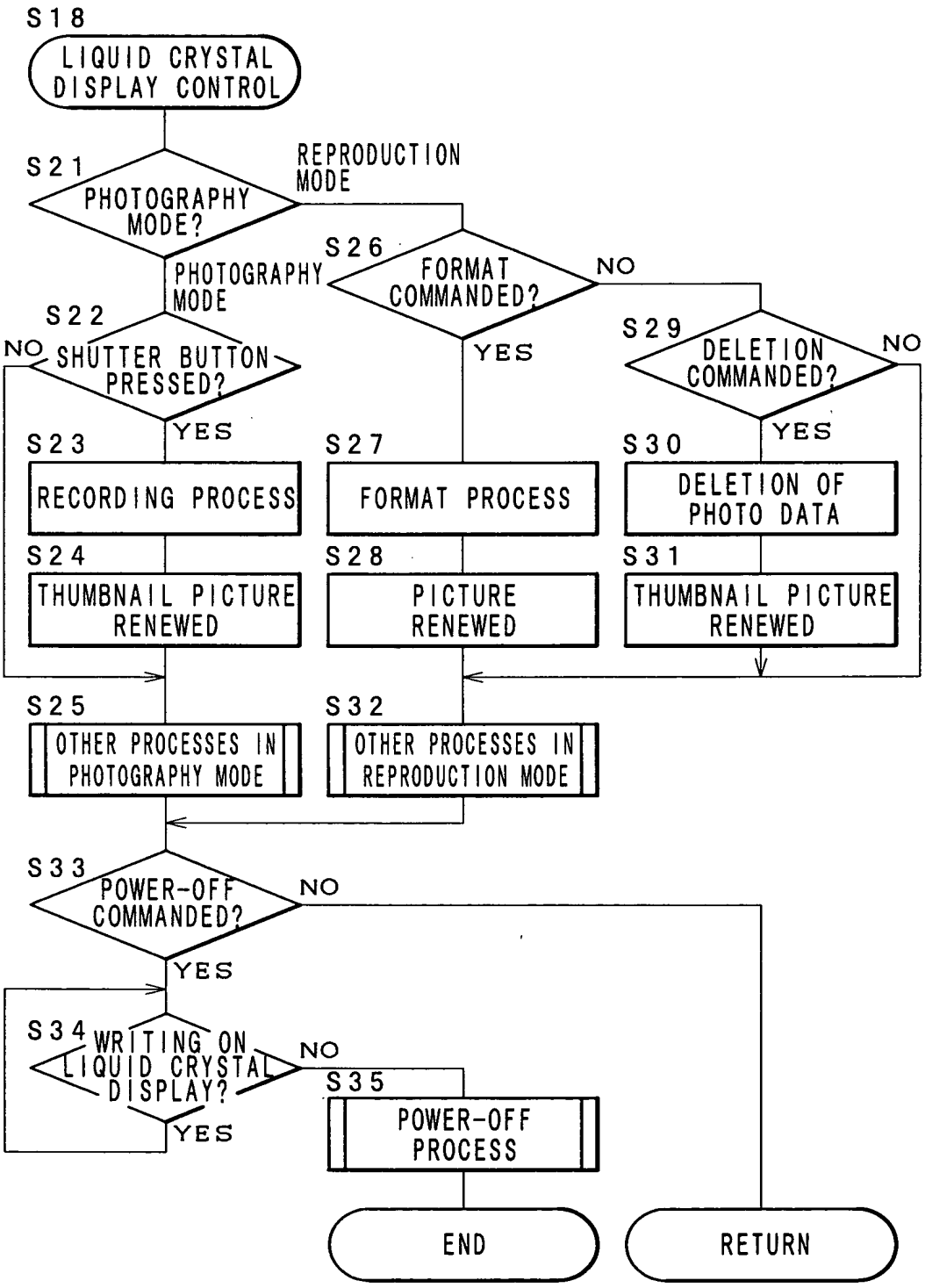


FIG. 23

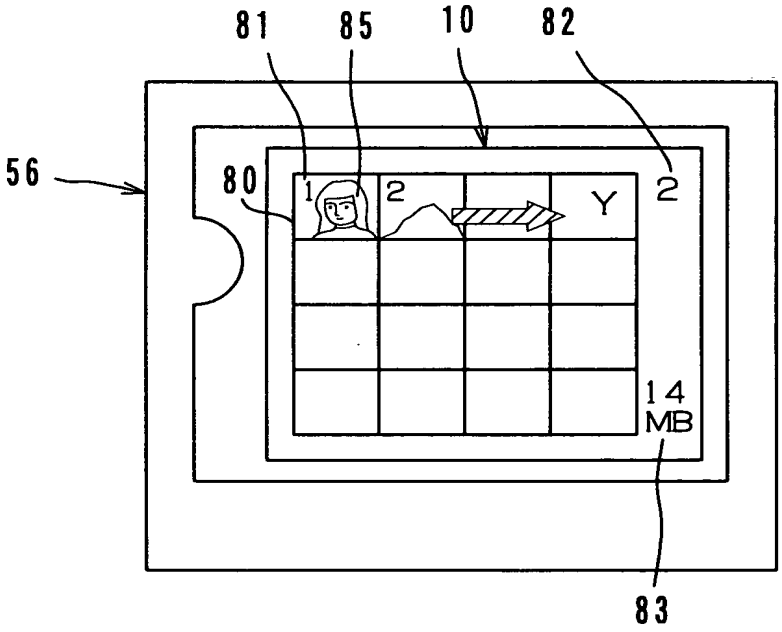


FIG. 24

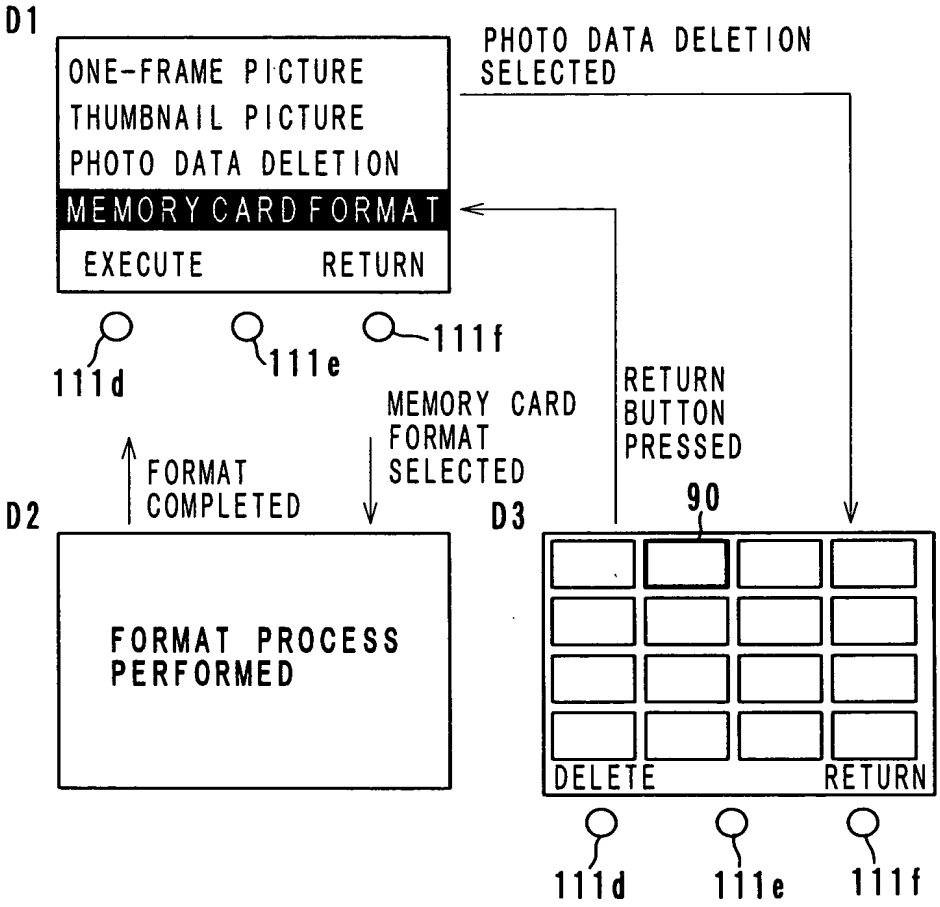

D1
ONE-FRAME PICTURE
THUMBNAIL PICTURE
PHOTO DATA DELETION
MEMORY CARD FORMAT
EXECUTE
RETURN
111d
111e
111f
PHOTO DATA DELETION SELECTED
RETURN BUTTON PRESSED
MEMORY CARD FORMAT SELECTED
FORMAT COMPLETED
D2
FORMAT PROCESS PERFORMED
D3
90
DELETE
RETURN
111d
111e
111f

FIG. 25

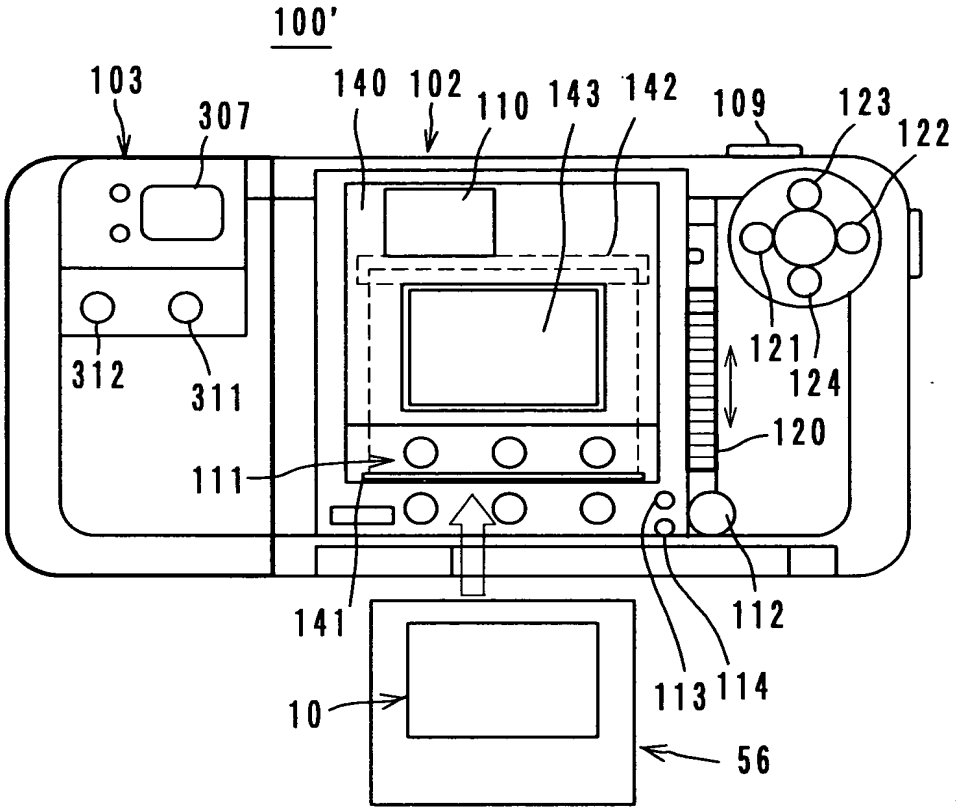
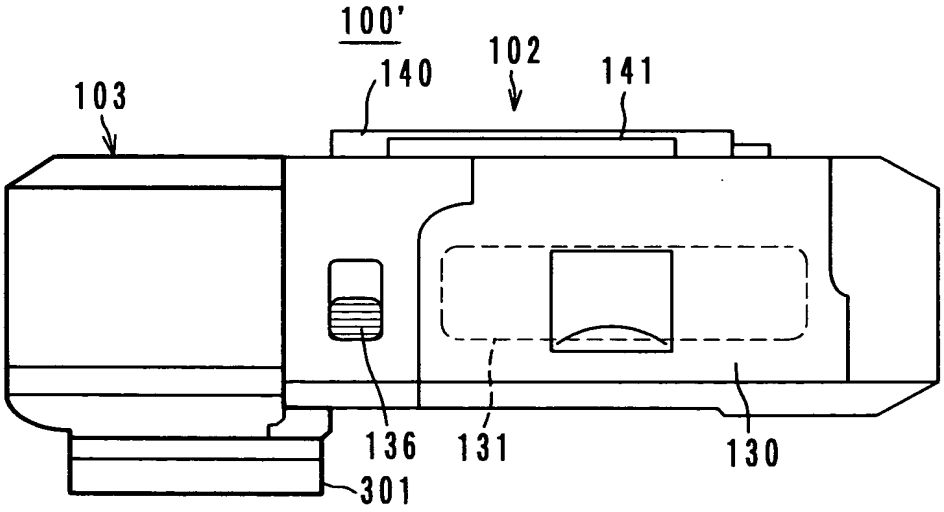
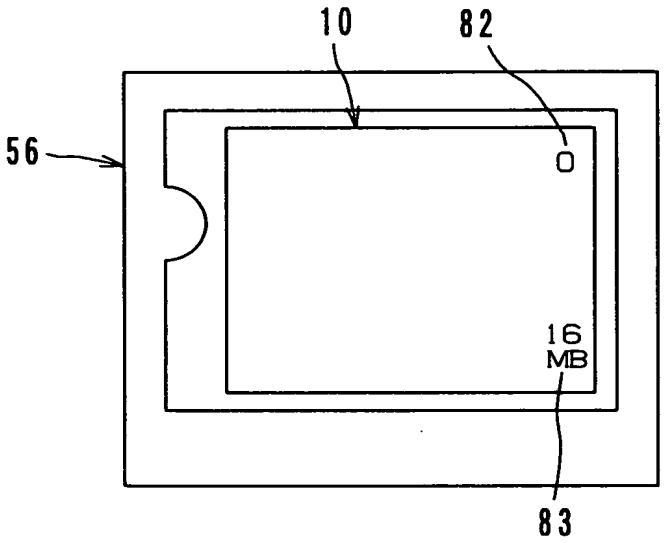

100'
103
307
140
102
110
143
142
109
123
122
312
311
121
124
120
111
141
112
113
114
10
56

FIG. 26


100'
140
102
141
103
136
131
130
301

0 0 2 7 0 0 3 5 0 5 2 4 0 5 6 0 0 2 7 0

FIG. 27



0052-0350-0750

FIG. 28

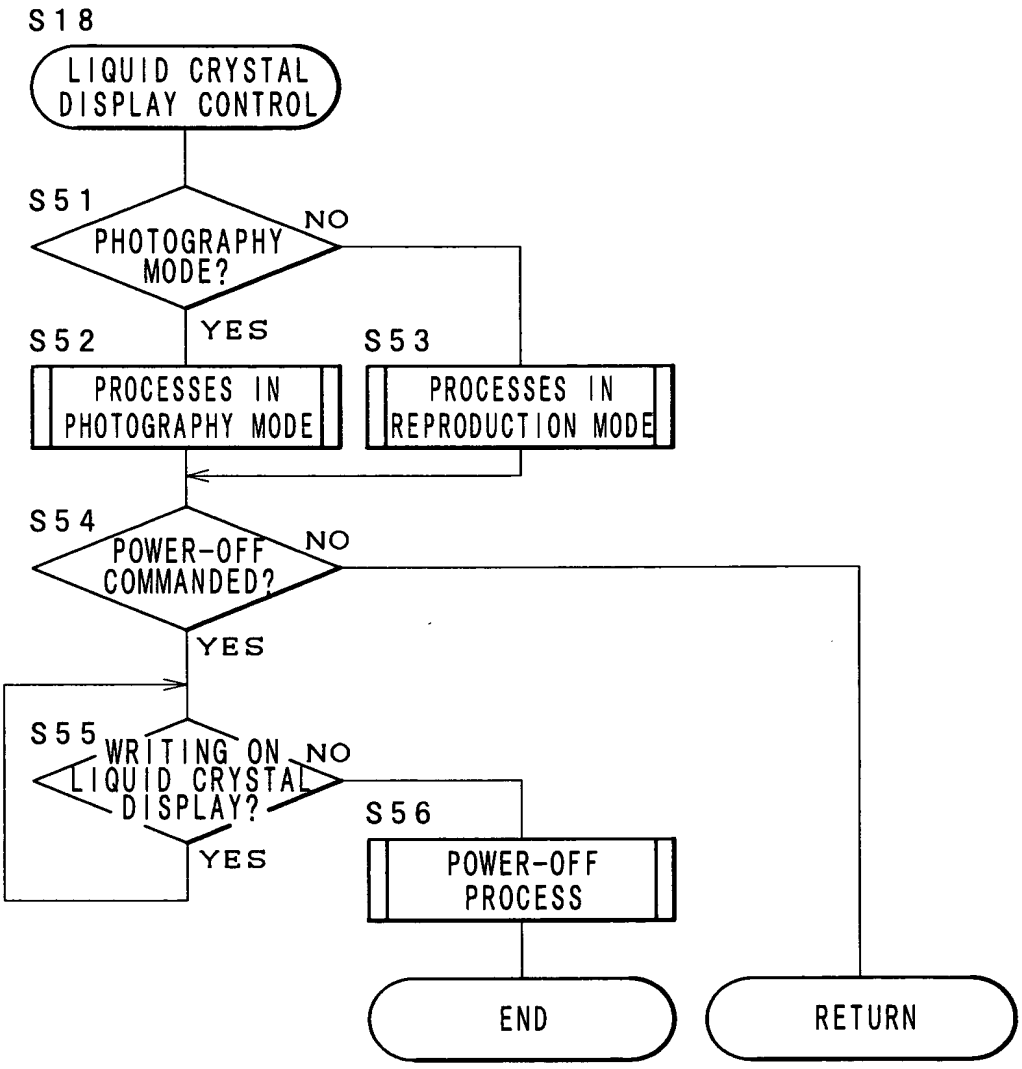


FIG. 29

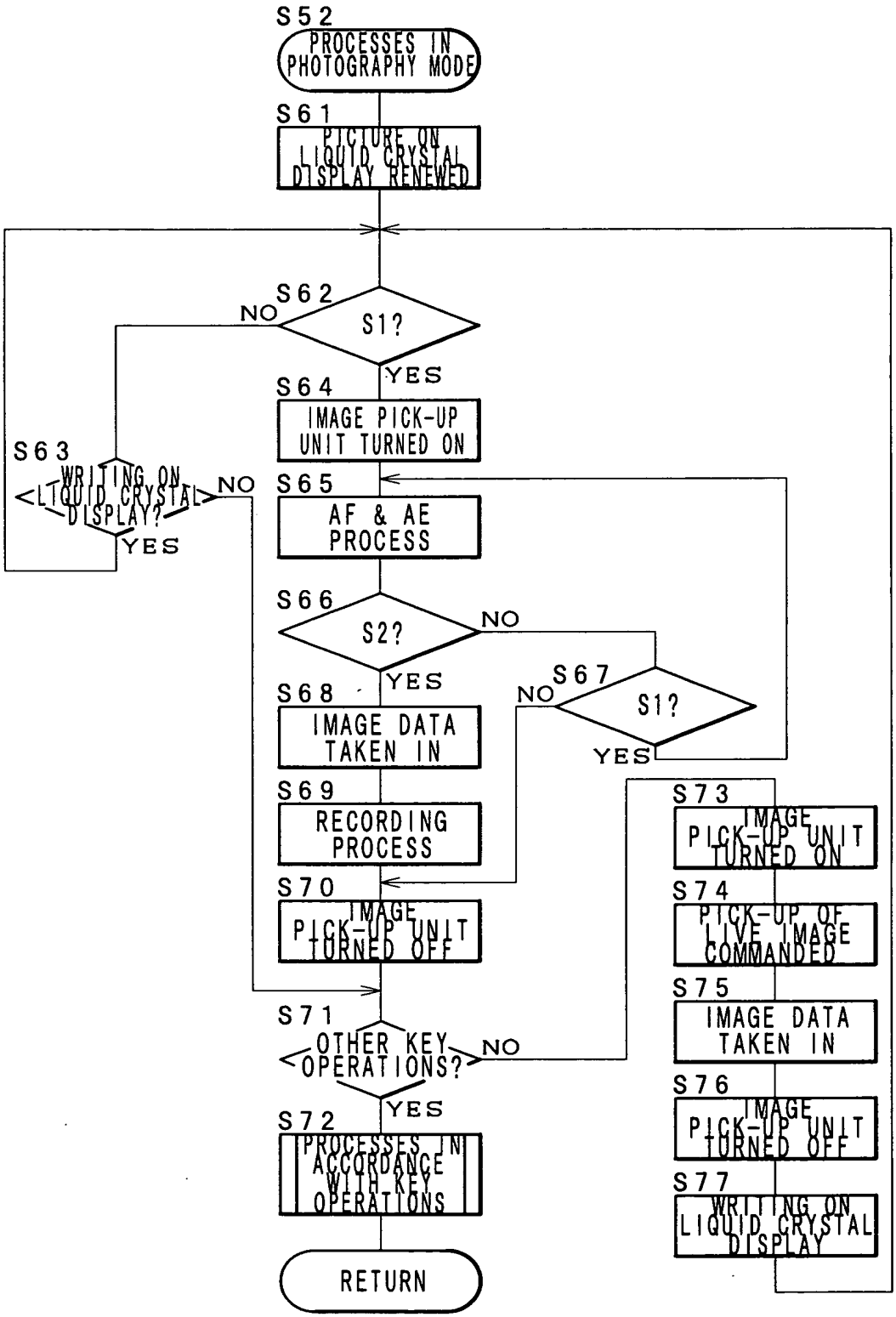
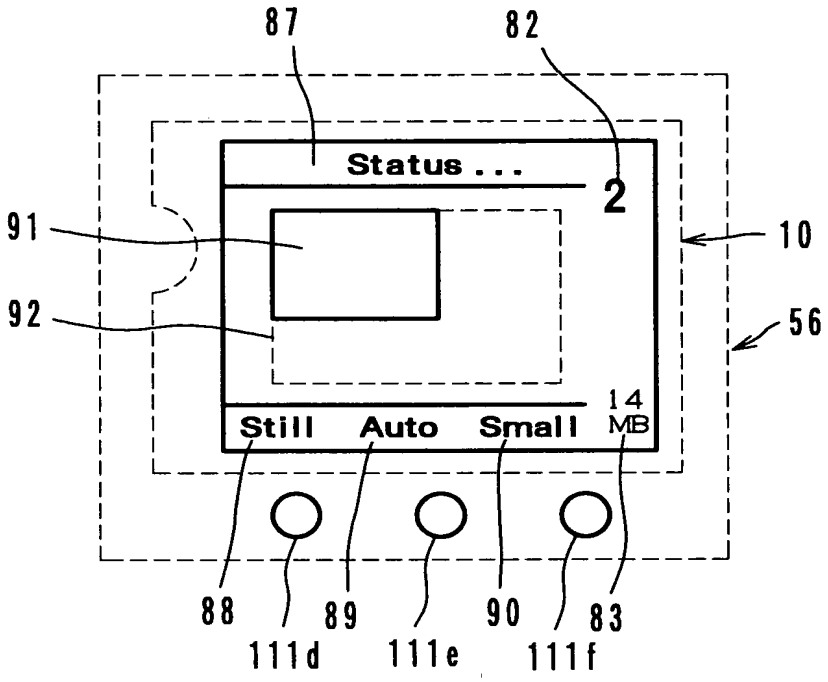
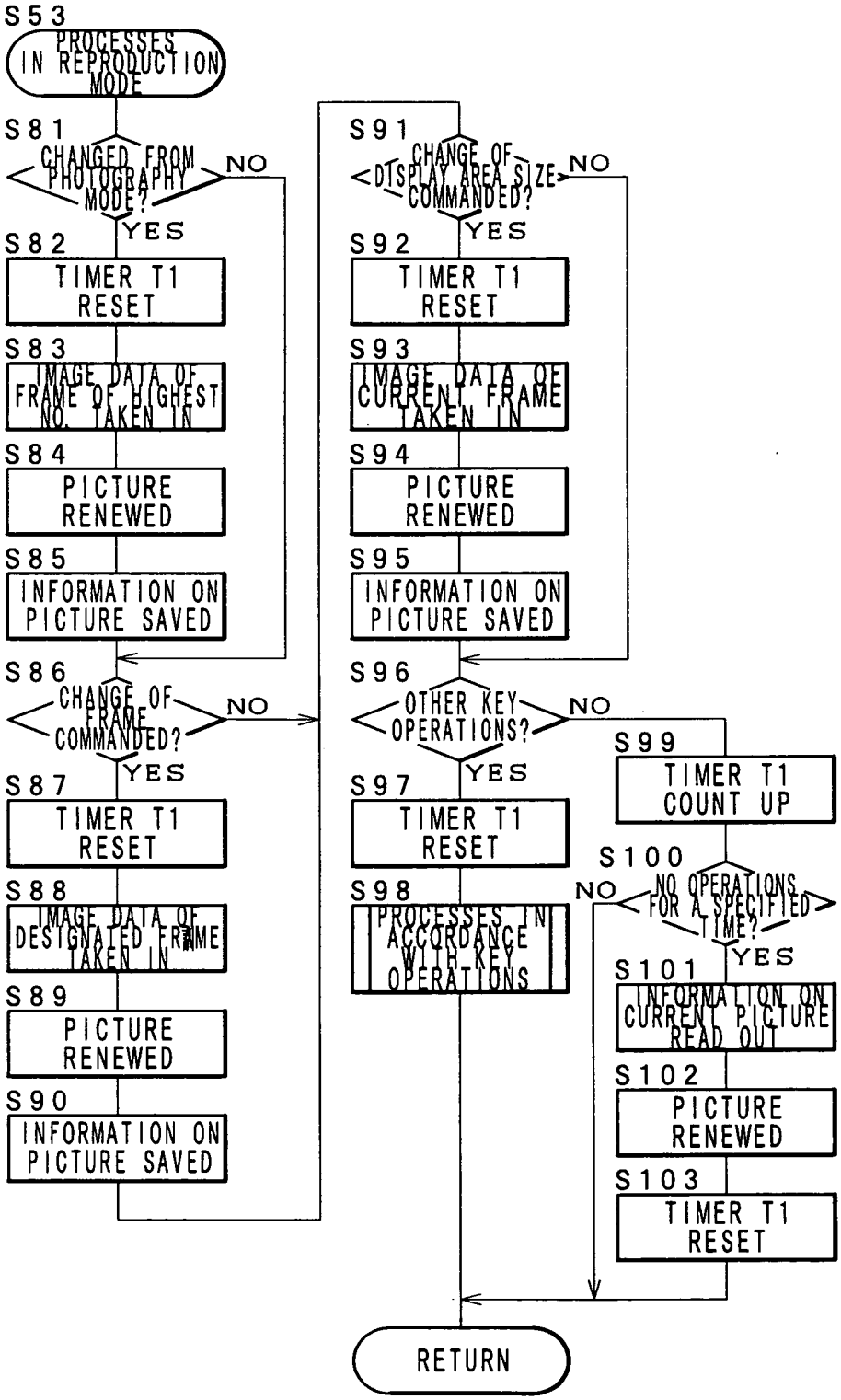

S52
PROCESSES IN PHOTOGRAPHY MODE
S61
PICTURE ON LIQUID CRYSTAL DISPLAY RENEWED
S62
S1?
NO
YES
S64
IMAGE PICK-UP UNIT TURNED ON
S63
WRITING ON <LIQUID CRYSTAL> DISPLAY?
NO
YES
S65
AF & AE PROCESS
S66
S2?
NO
YES
S67
S1?
NO
YES
S68
IMAGE DATA TAKEN IN
S69
RECORDING PROCESS
S70
IMAGE PICK-UP UNIT TURNED OFF
S71
<OTHER KEY OPERATIONS?>
NO
YES
S72
PROCESSES IN ACCORDANCE WITH KEY OPERATIONS
RETURN
S73
IMAGE PICK-UP UNIT TURNED ON
S74
PICK-UP OF LIVE IMAGE COMMANDED
S75
IMAGE DATA TAKEN IN
S76
IMAGE PICK-UP UNIT TURNED OFF
S77
WRITING ON LIQUID CRYSTAL DISPLAY

FIG. 30


87
82
Status . . .
2
91
10
92
56
14
MB
Still
Auto
Small
88
89
90
83
111d
111e
111f

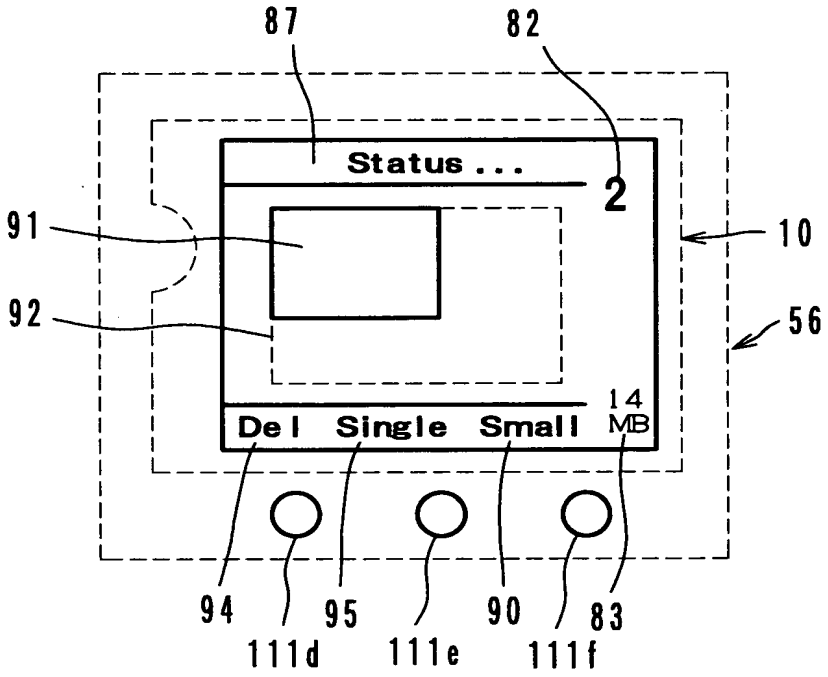
F I G. 3 1



0057635.0357635.0

0095-0356-0560

FIG. 32



F I G. 3 3

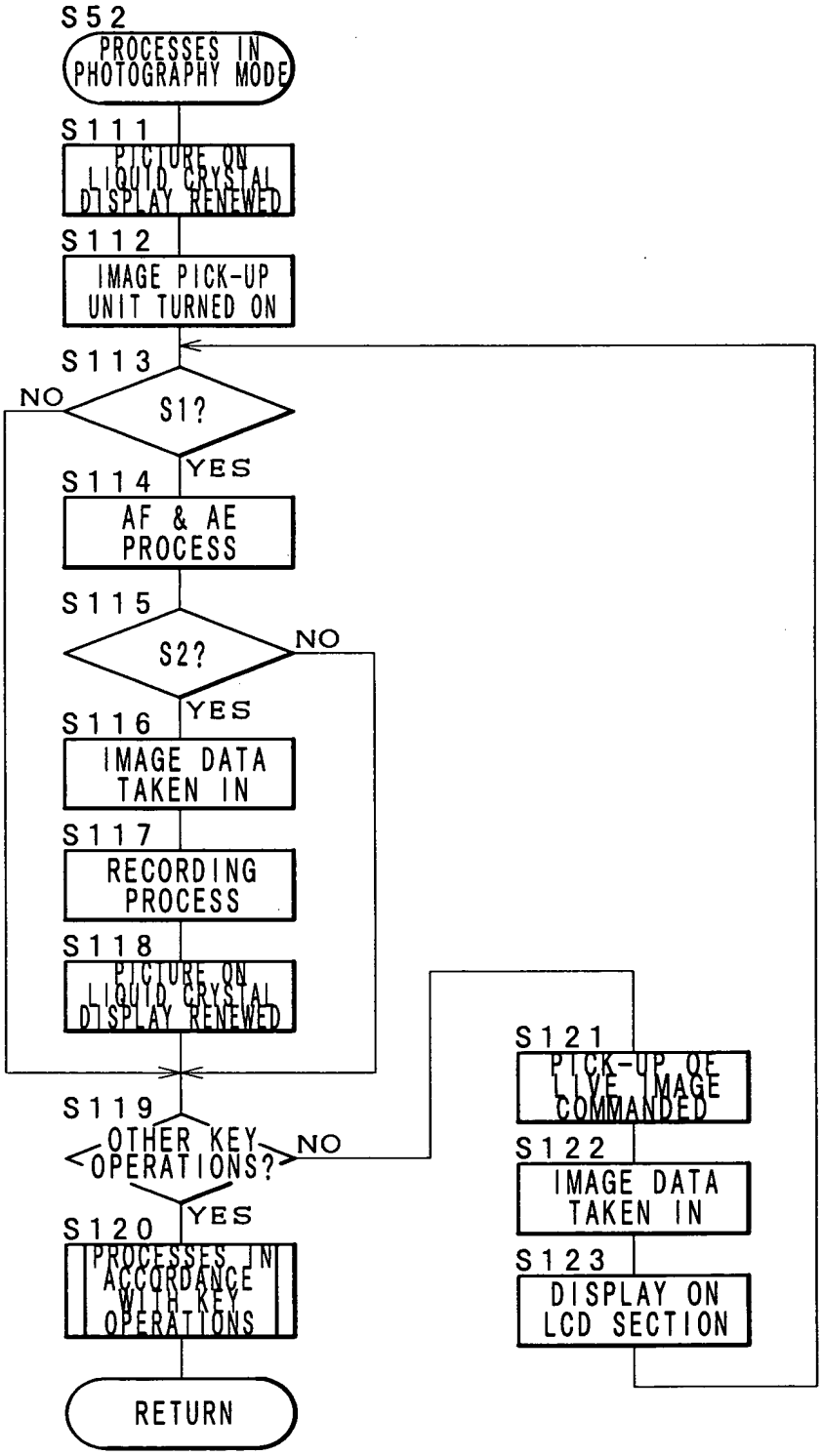

S52
PROCESSES IN PHOTOGRAPHY MODE
S111
PICTURE ON LIQUID CRYSTAL DISPLAY RENEWED
S112
IMAGE PICK-UP UNIT TURNED ON
S113
S1?
NO
YES
S114
AF & AE PROCESS
S115
S2?
NO
YES
S116
IMAGE DATA TAKEN IN
S117
RECORDING PROCESS
S118
PICTURE ON LIQUID CRYSTAL DISPLAY RENEWED
S119
OTHER KEY OPERATIONS?
NO
YES
S120
PROCESSES IN ACCORDANCE WITH KEY OPERATIONS
RETURN
S121
PICK-UP OF LIVE IMAGE COMMANDED
S122
IMAGE DATA TAKEN IN
S123
DISPLAY ON LCD SECTION

FIG. 34

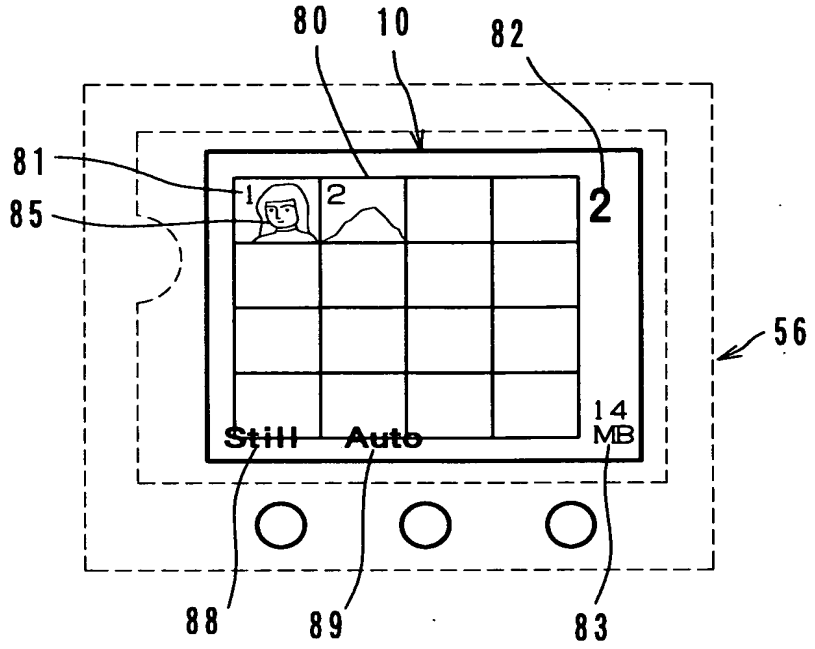

80
10
82
81
85
1
2
2
56
14
MB
Still
Auto
88
89
83

FIG. 35

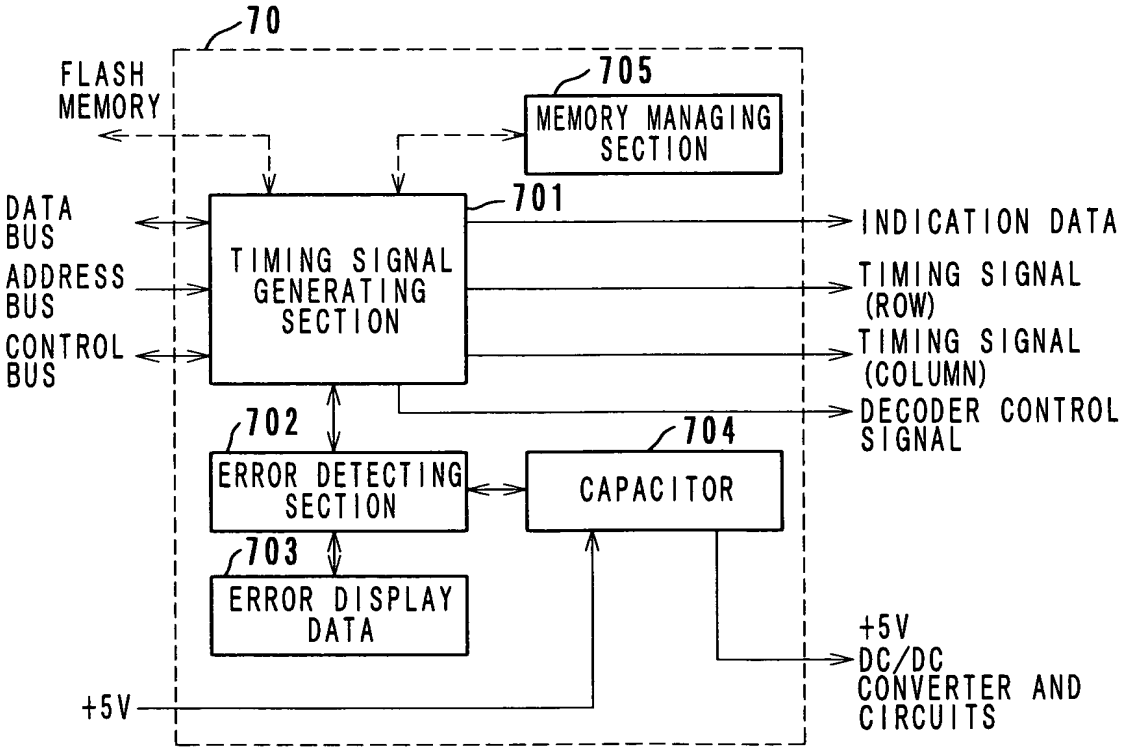
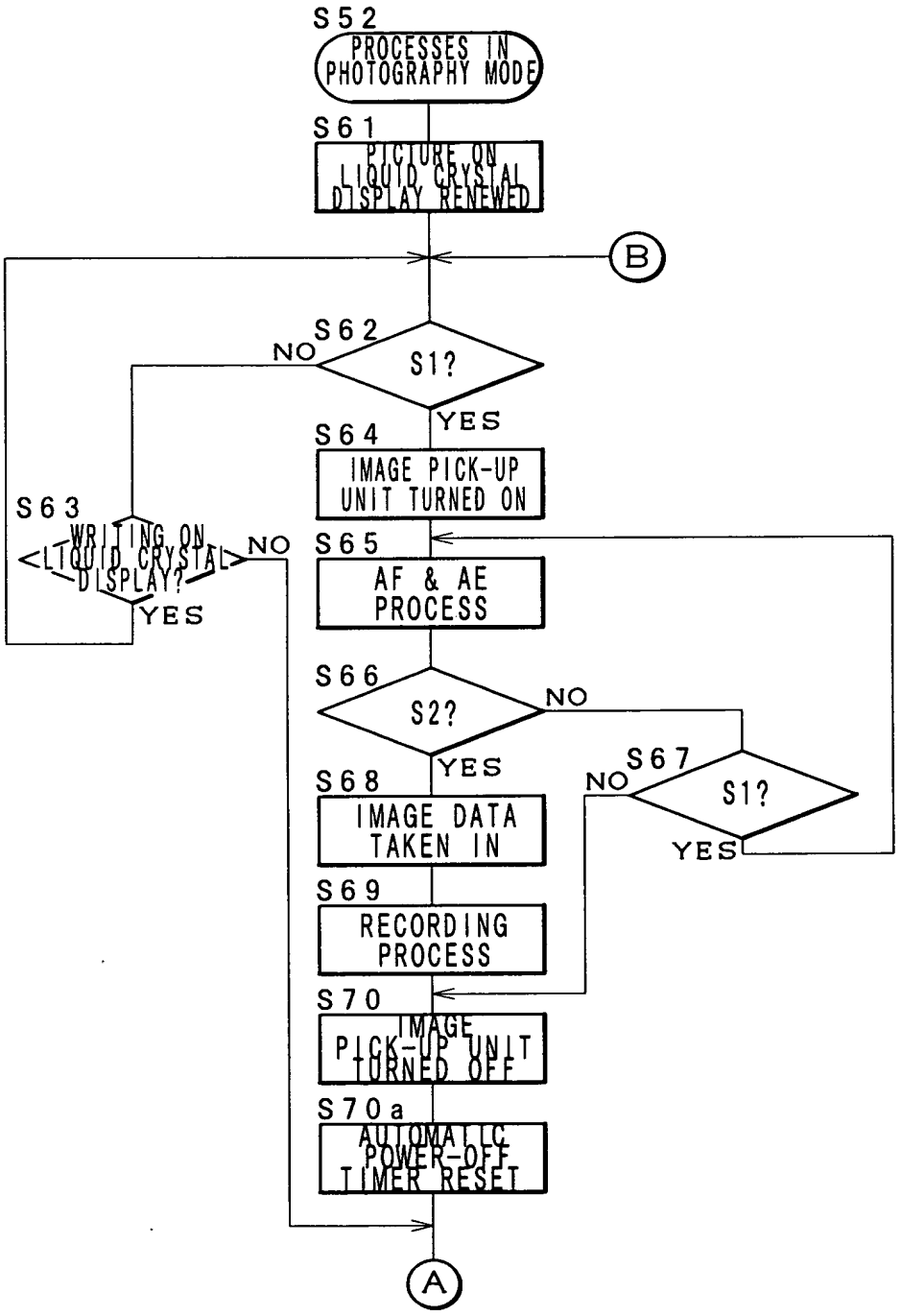

70
FLASH MEMORY
705
MEMORY MANAGING SECTION
701
DATA BUS
ADDRESS BUS
CONTROL BUS
TIMING SIGNAL GENERATING SECTION
INDICATION DATA
TIMING SIGNAL (ROW)
TIMING SIGNAL (COLUMN)
DECODER CONTROL SIGNAL
702
ERROR DETECTING SECTION
704
CAPACITOR
703
ERROR DISPLAY DATA
+5V
+5V DC/DC CONVERTER AND CIRCUITS

FIG. 36


S52
PROCESSES IN PHOTOGRAPHY MODE
S61
PICTURE ON LIQUID CRYSTAL DISPLAY RENEWED
B
S62
S1?
NO
YES
S64
IMAGE PICK-UP UNIT TURNED ON
S63
WRITING ON <LIQUID CRYSTAL> DISPLAY?
NO
YES
S65
AF & AE PROCESS
S66
S2?
NO
YES
S67
S1?
NO
YES
S68
IMAGE DATA TAKEN IN
S69
RECORDING PROCESS
S70
IMAGE PICK-UP UNIT TURNED OFF
S70a
AUTOMATIC POWER-OFF TIMER RESET
A

0055250

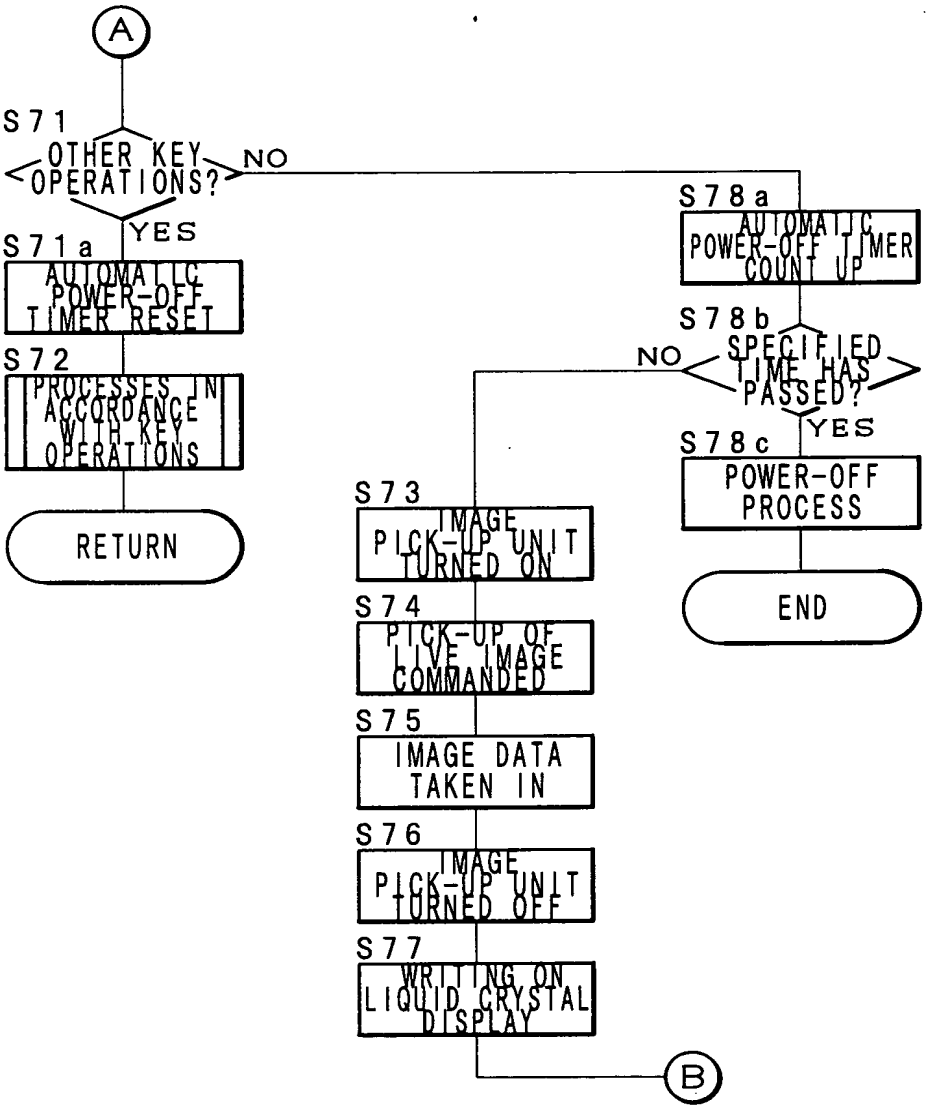



FIG. 37